

Milestone 1

INNOVATE 1X03: The World of Entrepreneurship

October 10, 2025

Jay Modhvadia - modhvadj

Jasraj Singh Johal - johalj11

Aditya Lahiri - lahira2

Part A - Problem Analysis

In an ideal world, students living in on campus residences would live in a comfortable stress free environment while focusing on academic and career growth. There would be no issues with dorm rooms and furniture would be sturdy, adjustable, and well-maintained. Minor issues, like loose shelves, broken drawers, or wobbly desks, would be repaired quickly and efficiently without disrupting daily routines. Students would feel confident in their ability to perform minor repairs or easily access affordable solutions without needing to wait very long. Instead of students focusing on minor inconveniences such as repairs and the stress that comes with it, the housing experience should be all about independence, comfort, and focus on academic success. The goal of this project is to improve the experience of living on campus as a student through identifying and addressing recurring maintenance issues. In reality, this is not the case. Multiple students living on campus are faced with many problems regarding the quality of their living environment. Some examples include poorly maintained dorm furniture, lack of tools, and limited access to timely maintenance services. Oftentimes, these issues do not get resolved as students lack the proper tools and knowledge to repair them on their own. The majority of these problems stem from the age of the residence. Older buildings tend to be more worn down and have faulty equipment as well. The bulk of students living on campus are freshmen. These are the students most affected by this problem and may skew their opinion on living alone. Some other consequences include dissatisfaction and even safety concerns. Stress and discomfort created from this situation can have an impact on a student's academic performance and hinder their future. One current alternative that students have is campus maintenance requests. This alternative offers trained professionals to help repair any faulty items. However, these requests are often deprioritized, leaving wait times stretching up to weeks or even months. Students can

also try to fix items on their own (tape, glue, etc.). Although this is a free and immediate solution, results are only temporary and may harm the students and/or the item further in the process. The last option is to ignore the problem. While this option is also free and requires the least labour, it can also greatly hinder a student's living experience. For example, ignoring a broken lightbulb means continuing the rest of your dorm life in darkness.

Part B - Problem Statement

Students living on campus face constant minor maintenance issues such as unstable furniture, faulty appliances, and minor damages that negatively impact their comfort, focus and safety. Current solutions are either slow, costly, and unsafe which leave these problems outstanding. In an ideal situation, students would have quick and affordable access to safe and reliable dorm repair assistance which allows them to focus on other tasks and improve their comfort and stress.

Part C - Solution Identification Part 1

1. Customer Profile/Map:

Customer Description: Students living in on-campus residences or off-campus student housing. Property managers or residence assistants who want fewer maintenance requests.

Customer Jobs: Fix or assemble common items (e.g., tighten a chair, hang a shelf, repair holes in drywalls, etc). Save time and avoid waiting for residence maintenance teams. Manage small emergencies or setup tasks independently Maintain comfort and safety in their living space

Customer Pains: Lack of tools and repair knowledge. Delays or unresponsiveness from official maintenance. High costs for calling external handymen. Stress or inconvenience from living with minor issues (loose furniture, broken fixtures).

Customer Gains: Quick, affordable fixes. Convenient, on-demand help from trusted peers. Feeling empowered & self-sufficient. A well-maintained, comfortable living space.

Customer Yields: A quick, easy and cost effective way to repair small pains that would otherwise be expensive and feel embarrassing for some to ask from external handymen.

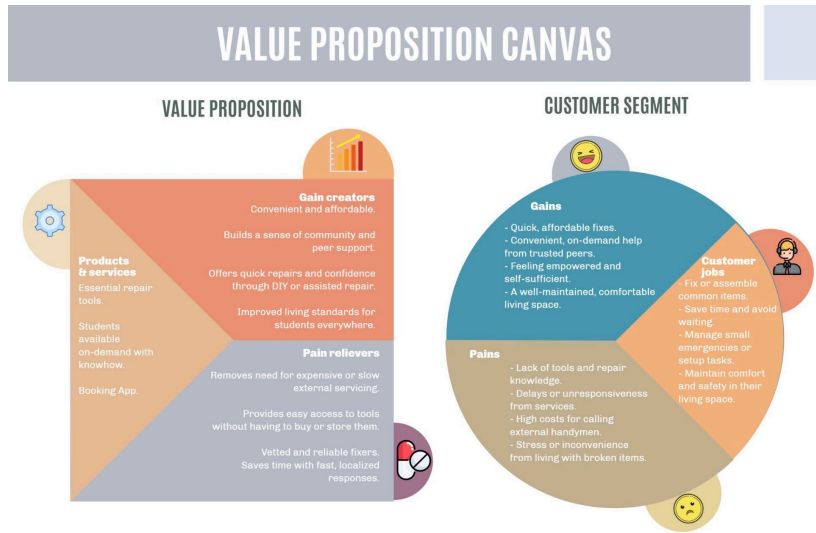
2. Value Map:

Products & Services: Essential repair tools (screwdrivers, pliers, nails, measuring tape, adhesive hooks, etc.) Students available on-demand for small repair jobs who will be verified with knowhow on the targeted fixes. Simple app or website for scheduling repairs or reserving kits.

Pain Relievers: Removes need for expensive or slow external maintenance services. Provides easy access to tools without having to buy or store them. Ensures vetted and reliable fixers for peace of mind. Saves time with fast, localized responses.

Gain Creators: Convenient and affordable, designed for the student budget. Builds a sense of community and peer support. Offers quick satisfaction and confidence through DIY or assisted repair. Easily expandable across campuses, improving living standards for students everywhere.

Yields: A simple, easy and affordable way to get help with repairs in dorms and rented units without any stress or embarrassment.



Part 2 a. SCAMPER Analysis

S - Substitute: Substitute one-time payments with low-cost membership/credit bundles for frequent small fixes. Substitute ad-hoc texting with in-app chat + job checklist/photos to standardize quality. Substitute owning tools with locker-based kit lending (ID-verified checkout).

C - Combine: Combine the repair service with DIY micro-guides + optional video assist for truly trivial tasks. Combine student fixer networks with Residence/RA oversight (approved task list, safety rules). Combine job history + ratings to power a light priority/loyalty system.

A - Adapt: Adapt the gig marketplace model (TaskRabbit/Uber) to a closed campus network (student ID SSO, campus-only locations). Adapt library circulation processes for toolkit lending (late fees, reminders, quick sanitation checks).

M - Modify/Magnify/Minify Modify scope: limit to non-specialized, low-risk fixes (no electrical/plumbing; <30 minutes; lightweight tools only). Magnify trust: add training

micro-badges (e.g., “Furniture Stabilization,” “Wall Anchors”) shown on the fixer’s profile. Minify friction: pre-packaged micro-kits (e.g., “Chair-Tighten Kit,” “Wall-Hang Kit”) to cut visit time.

P - Put to Another Use: Use service for move-in/set-up days, exam-week quick fixes, and off-campus student rentals. Offer property-manager dashboard, aggregate trends to preempt recurring issues (e.g., a residence wing with many loose drawers).

E - Eliminate: Eliminate cash handling (card/Apple Pay only). Eliminate unscoped requests, intake requires photos + selected task types to avoid mission creep. Eliminate multi-hour jobs; anything beyond scope routes to official maintenance.

R - Reverse/Rearrange: Reverse reactive flow: allow proactive “health check” sign-ups at start of term for bulk minor fixes. Rearrange logistics: smart lockers near residences for 24/7 tool pickup/return; group bookings for floors/suites.

b. Based on the SCAMPER analysis, we will add DIY micro-guides with optional video assist to cut costs and wait times for trivially easy tasks, and introduce smart-locker tool lending with student-ID SSO so students can reliably access tools without owning them and get faster turnaround. We’ll narrow the task scope and require training badges, backed by a 7-day workmanship guarantee, to strengthen safety, consistency, and trust. Partnering with residence teams and offering a basic property-manager dashboard aligns the service with campus policies, reduces risk, and helps prevent repeat issues through trend visibility. Finally, we’ll offer membership/credit bundles to keep pricing predictable for students and improve retention.

Part 3 A campus-only micro-repair platform with two paths: **(A) Book a vetted student fixer** for small, safe tasks; **(B) Borrow a pre-packed tool kit** (via smart lockers) and follow **bite-size**

DIY guides or request **video assist**. Authentication uses student ID SSO. Tasks are limited to low-risk fixes (e.g., tighten furniture, hang items with proper anchors, replace simple parts, minor patch/adhesive fixes).

How it addresses the problem: Our solution addresses the problem across four fronts: speed, affordability, safety/trust, and access. Campus-local responders and 24/7 lockers compress wait times from weeks to hours, or even minutes. The DIY path plus membership/credit bundles keeps costs student-friendly. Scoped tasks, training badges, before/after photos, and a 7-day guarantee reduce risk and rework. And by giving students tool access without needing to buy or store equipment, while property managers receive fewer minor tickets, the overall maintenance burden drops for everyone.

How it works (operating flow)

1. **Sign-in:** Student logs in with campus ID.
2. **Intake:** Choose **Book Fixer**, **Borrow Kit**, or **Video Assist**. Upload photos; pick a task type from an approved list.
3. **Estimate & slot:** App shows estimated time/cost/required kit. The student selects a time; credits or card on file.
4. **Assignment:** The job is offered to nearby vetted fixers with relevant **training badges**.
5. **Visit or pickup:**
 - a. *Book Fixer:* Fixer completes a **checklist**, takes before/after photos, & closes job.
 - b. *Borrow Kit:* App releases a locker for pickup; DIY guide opens in-app; optional video assist on demand.

6. **Quality & safety:** 7-day workmanship guarantee; in-app feedback; auto-escalation if unresolved.
7. **PM dashboard (residence):** anonymized stats on common issues by building/floor to plan preventive maintenance.

Pricing (illustrative): DIY kit borrow: \$0-\$5 per 24h + refundable deposit; late fees apply (like a library). Booked fix: flat micro-jobs (\$10-\$25) capped at 30 minutes; bundle credits for discounts. Video assist: \$5 per 15 minutes or included with membership.

Changes incorporated after SCAMPER: Added DIY micro-guides + video assist, smart-locker lending, training badges, 7-day guarantee, membership/credits, and a light PM dashboard, while tightening scope to low-risk tasks only.

Part 4 Needs (rows) vs. Features (columns). Features (legend):

F1 = On-demand vetted student fixers, F2 = Smart-locker tool-kit lending, F3 = App scheduling, tracking, in-app chat & photos, F4 = Safety: scoped task list, training badges, 7-day guarantee, F5 = DIY micro-guides + optional video assist, F6 = Residence partnership + PM dashboard

Need	F1	F2	F3	F4	F5	F6
Fast help / shorter wait times	✓	✓	✓			
Affordable options	✓	✓			✓	
Safe & trustworthy repairs	✓		✓	✓		
Easy access to tools		✓			✓	
DIY empowerment / less stress		✓			✓	
Transparent process (status, photos, guarantee)			✓	✓		
Fewer minor tickets for residence/property managers	✓	✓				✓

The matrix shows that our service directly addresses students' top needs, speed, affordability, safety, and tool access, through a blend of on-demand help (F1), kit lending (F2), and transparent workflows (F3-F4). DIY guides/video assist (F5) reduce cost and wait time while building confidence, and residence partnership (F6) lowers maintenance backlog and reveals trends for prevention. Together, these features deliver a faster, safer, and cheaper path to a livable dorm environment.

Part 5 Student-to-Student Service Model: Unlike traditional maintenance or handyman services, this program connects students with trained peer fixers. It creates a relatable, trust-based experience while offering affordable labor costs.

Hybrid DIY + On-Demand Assistance: Most solutions focus on either self-service (tool rentals) or full-service repairs. This model combines both - students can try simple fixes themselves with a kit or call a peer fixer if they need help.

Campus-Centric Design: The service is built specifically for residence halls and student rentals, not general households. Pricing, access, and tools are all optimized for student living spaces and common dorm repair issues.

Lightweight, Scalable Toolkit System: Toolkits are standardized and easily replicated across campuses, allowing quick expansion with minimal logistics, something traditional maintenance programs can't achieve as efficiently while also allowing to tackle more fixes

Community-Building Aspect: By employing and empowering student fixers, the service fosters campus engagement, peer learning, and job opportunities, aligning with student life and sustainability goals.

Flat-Fee Transparent Pricing: No hidden costs or hourly rates, just a clear flat fee per visit or rental, removing uncertainty and financial stress for students used to budgeting tightly.

Part 6 For students in dorms or nearby rentals who face frequent small repair problems, the **DIY Dorm Repair Kit + On-Call Student Fixers** offers an affordable, fast, and reliable way to fix minor issues. Unlike waiting for maintenance or hiring expensive help, our service provides convenient toolkits and trusted student fixers, empowering students to maintain a comfortable, functional living space.

Part D - Justification: Living on campus is becoming a necessity for many students. For example, The University of Toronto has over 10,000 students living in university housing (Perry, n.d.). McMaster University has also been pumping out studying living accommodations such as 10 Bay Residence and Lincoln Alexander Hall (McMaster University, n.d.). With the sheer growth of this market, there also grows a need for improved maintenance for these accommodations. Since many dorms and student rental units are reused, it results in frequent minor damages and issues that are left unresolved. There are many aspects of dorm life that students may have complaints about. However, one of the main complaints is usually the living situation. For example, McMaster students' main complaints for the downtown location were maintenance issues (Hristova, 2023). By targeting the area of highest dissatisfaction, we are ensuring to reach an area of demand with individuals that will value our product/service. The DIY Dorm Repair Kit + On-Call Student Fixers addresses these issues by offering two complementary components: a rental-based dorm repair toolkit and a network of trained students that can be booked on demand for quick and affordable repairs or installations. Currently, the only solutions are campus maintenance departments, improvised DIY fixes, or ignoring the problem. None of these options offer affordability for students while also having efficient response times, convenience and adequate safety procedures.

References (Part D)

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